Amendment on 27 June 2024
Resolved by Technical Committee on 30 January 2024

Arrangements of Fuel Oil Service Tanks

Object of Amendment

Guidance for the Survey and Construction of Steel Ships Part D

Reason for Amendment

Regulation 26 of Chapter II-1 of the SOLAS Convention requires that two fuel oil service tanks of a capacity capable of operating main engines and important auxiliary machinery for at least 8 hours for each type of fuel or some other equivalent arrangement be provided. These requirements have already been incorporated into the NK Rules.

Although some examples of the meaning of “equivalent arrangements” are given in IACS Unified Interpretation (UI) SC123, the definition of “Marine Diesel Oil” (MDO) used in the UI was unclear. IACS, therefore, adopted UI SC123(Rev.5) in September 2023 to clarify that any fuel oil which requires post service tank heating to achieve its required injection viscosity is to be not regarded as MDO.

Accordingly, relevant requirements are amended based on IACS UI SC123(Rev.5).

Outline of Amendment

The main contents of this amendment are as follows:

(1) Clarifies fuel oils which require post service tank heating to achieve their required injection viscosities are not to be regarded as MDO with respect to equivalent arrangements for the two fuel oil service tanks specified in Part D of the Rules for the Survey and Construction of Steel Ships.
(2) Clarifies the correspondence between Part D of the Rules for the Survey and Construction of Steel Ships and IACS UI SC123(Rev.5) regarding equivalent arrangements for two fuel oil service tanks.

Effective Date and Application

(1) Fig. D13.9.1-2 Note (3) and Fig. D13.9.1-3 Note (1) of Guidance for the Survey and Construction of Steel Ships Part D
This amendment applies to ships for which the date of contract for construction is on or after 1 July 2024.
(2) Other than the preceding (1)
This amendment applies to ships the keels of which are laid or which are at a similar stage of construction on or after 1 July 1998.

ID: DD23-25

Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

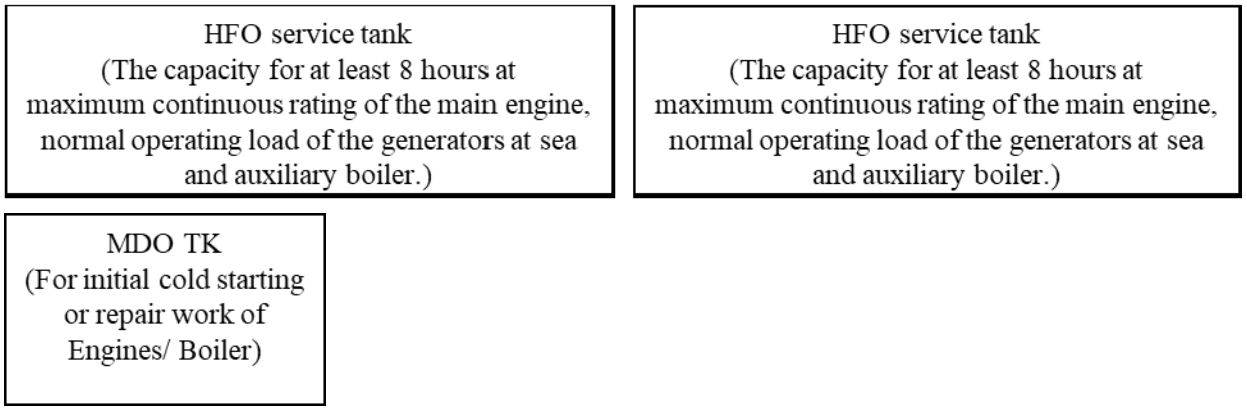
Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part D MACHINERY INSTALLATIONS** **D13 PIPING SYSTEMS** **D13.9 Fuel Oil Systems** **D13.9.1 General** **3** The "fuel oil service tanks" and "equivalent arrangements" for commonly utilized fuel oil piping systems specified in **13.9.1-6**, **Part D of the Rules** are to be in accordance with the following:	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part D MACHINERY INSTALLATIONS** **D13 PIPING SYSTEMS** **D13.9 Fuel Oil Systems** **D13.9.1 General** **3** The "fuel oil service tanks" refers to those fuel oil tanks which contain only fuel of a quality ready for use and that meet any specifications required by the equipment manufacturer. In this case, service tanks are to be declared as such and they are not to be used for any other purpose specified in **13.9.1-6**, **Part D of the Rules**.	UI SC123 Interpretation 1
(1) The wording "fuel oil service tanks" refers to those fuel oil tanks which contain only fuel of a quality ready for use and that meet any specifications required by the equipment manufacturer. In such cases, service tanks are to be declared as such and are not to be used for any other purpose.	(Newly added)	Interpretation 2
(2) Use of setting tanks with or without purifiers, or purifiers alone, and one service tank is not acceptable as an "equivalent arrangement" for two service tanks.	(Newly added)	Interpretation 3
(3) Examples of commonly utilized arrangements and	(Newly added)	UI SC123 Para. 3

Amended	Original	Remarks
examples deemed “equivalent arrangements” complying with **13.9.1-6** and **-7**, **Part D of the Rules** are shown in but not limited to **Fig. D13.9.1-2** and **Fig. D13.9.1-3**. In cases where providing such “equivalent arrangements”, however, propulsion and vital systems which use two types of fuel are to support rapid fuel changeover and are to be capable of operating under all normal operating conditions at sea with both types of fuel (heavy fuel oil (HFO) and marine diesel oil (MDO)).		

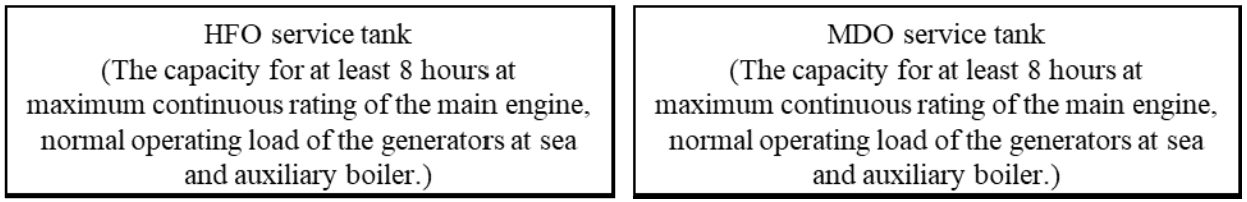
Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

Amended	Original	Remarks
Fig. D13.9.1-2 Examples of the Arrangements for Main and Auxiliary Engines and Auxiliary Boilers Operating with HFO		UI SC123 Para. 1 (a) Para. 1.1 (b) Para. 1.2

(a) Examples of general arrangements



(b) Examples of equivalent arrangements(1), (2)



Notes:

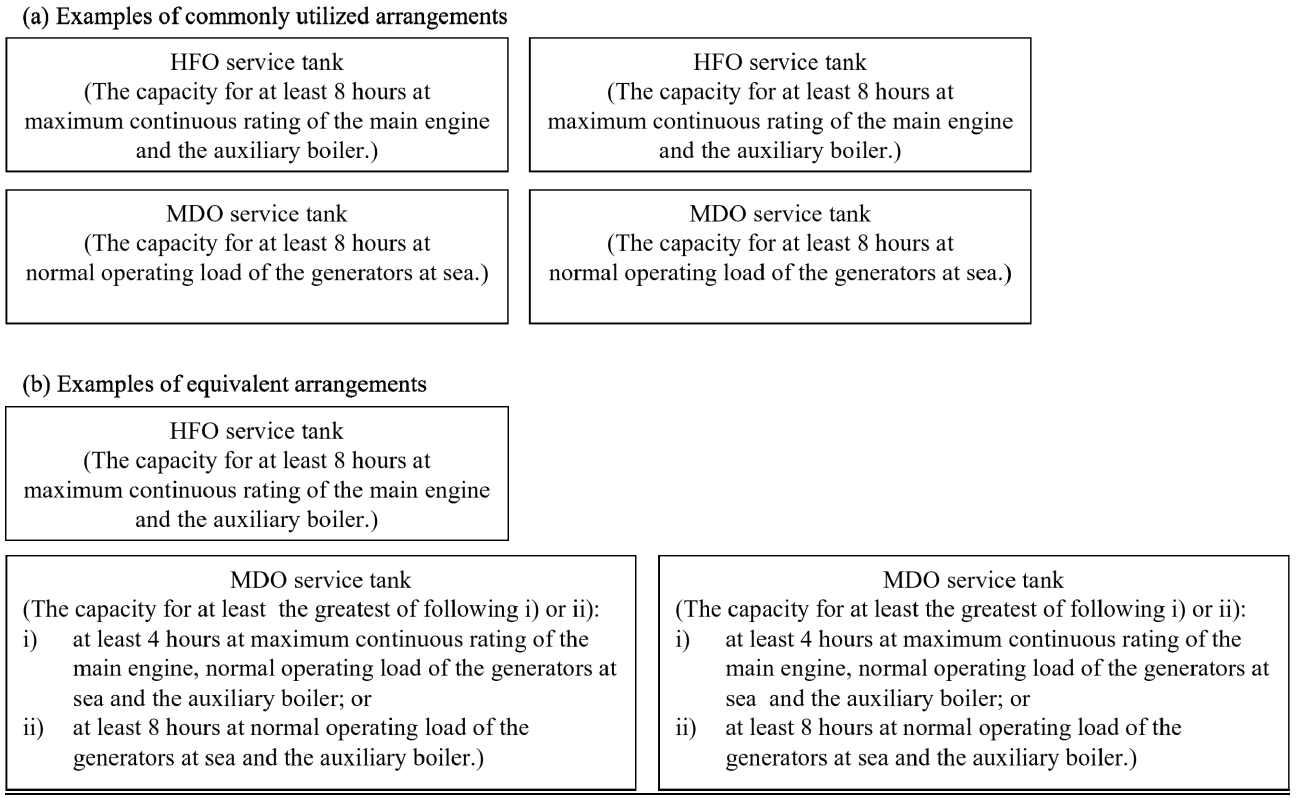
(1) This arrangement only applies where main and auxiliary engines can operate with heavy fuel oil under all load conditions and, in the case of main engines, during manoeuvring.

(2) For pilot burners of auxiliary boilers (if provided), an additional MDO tank for 8 hours of operation may be necessary.

Notes:
(1)
UI SC123
Para. 1.2-1
(2)
UI SC123
Para. 1.2-2

Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

Amended	Original	Remarks
Fig. D13.9.1-3 Example of the Arrangements for Main Engines and Auxiliary Boilers Operating with HFO, and Auxiliary Engines Operating with MDO		UI SC123 Para. 2 (a) Para. 2.1 (b) Para. 2.2



Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

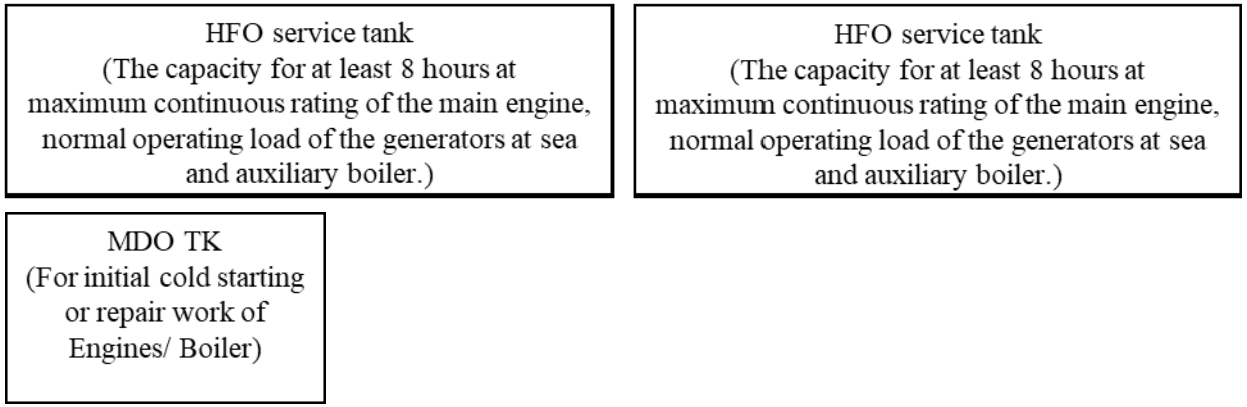
Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 27 June 2024. **2.** Notwithstanding the amendments to the Guidance, the current requirements apply to ships the keels of which were laid or which were at a similar stage of construction before 1 July 1998. (Note) The term “a similar stage of construction” means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is the less.		

Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

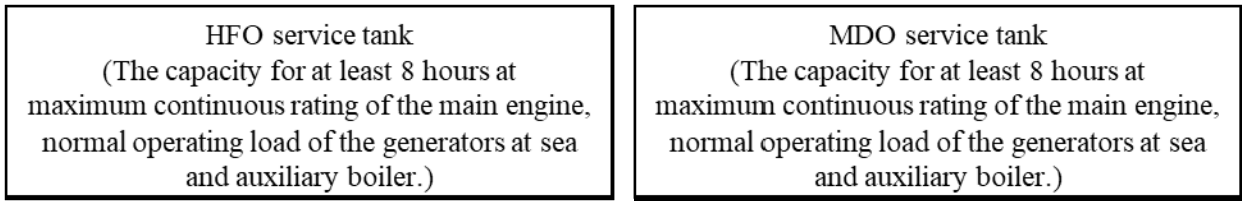
Amended	Original	Remarks

Fig. D13.9.1-2 Examples of the Arrangements for Main and Auxiliary Engines and Auxiliary Boilers Operating with HFO

(a) Examples of general arrangements



(b) Examples of equivalent arrangements(1), (2), (3)



Notes:

(1) This arrangement only applies where main and auxiliary engines can operate with heavy fuel oil under all load conditions and, in the case of main engines, during manoeuvring.

(2) For pilot burners of auxiliary boilers (if provided), an additional MDO tank for 8 hours of operation may be necessary.

(3) Fuel oils which require post service tank heating to achieve their required injection viscosities are not to be regarded as MDO in this context.

Notes: (3)
UI SC123 Notes(1)

Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

Amended	Original	Remarks

Fig. D13.9.1-3 Example of the Arrangements for Main Engines and Auxiliary Boilers Operating with HFO, and Auxiliary Engines Operating with MDO

(a) Examples of commonly utilized arrangements

HFO service tank (The capacity for at least 8 hours at maximum continuous rating of the main engine and the auxiliary boiler.)	HFO service tank (The capacity for at least 8 hours at maximum continuous rating of the main engine and the auxiliary boiler.)
MDO service tank (The capacity for at least 8 hours at normal operating load of the generators at sea.)	MDO service tank (The capacity for at least 8 hours at normal operating load of the generators at sea.)

(b) Examples of equivalent arrangements(1)

HFO service tank (The capacity for at least 8 hours at maximum continuous rating of the main engine and the auxiliary boiler.)	
MDO service tank (The capacity for at least the greatest of following i) or ii): i) at least 4 hours at maximum continuous rating of the main engine, normal operating load of the generators at sea and the auxiliary boiler; or ii) at least 8 hours at normal operating load of the generators at sea and the auxiliary boiler.)	MDO service tank (The capacity for at least the greatest of following i) or ii): i) at least 4 hours at maximum continuous rating of the main engine, normal operating load of the generators at sea and the auxiliary boiler; or ii) at least 8 hours at normal operating load of the generators at sea and the auxiliary boiler.)

Notes:

(1) Fuel oils which require post service tank heating to achieve their required injection viscosities are not to be regarded as MDO in this context.

Notes: (1)
UI SC123 Notes (1)

Amended-Original Requirements Comparison Table (Arrangements of Fuel Oil Service Tanks)

Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 1 July 2024. **2.** Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction* is before the effective date. * "contract for construction" is defined in the latest version of IACS Procedural Requirement (PR) No.29. IACS PR No.29 (Rev.0, July 2009) **1.** The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding. **2.** The date of "contract for construction" of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a "series of vessels" if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided: (1) such alterations do not affect matters related to classification, or (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval. The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed. **3.** If a contract for construction is later amended to include additional vessels or additional options, the date of "contract for construction" for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a "new contract" to which **1.** and **2.** above apply. **4.** If a contract for construction is amended to change the ship type, the date of "contract for construction" of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder. Note: This Procedural Requirement applies from 1 July 2009.		